

Attorney Ref. No. 012.P1009

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Patent

AUG 31 2006

IN THE CLAIMS

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

What is claimed is:

Claim 1 (canceled)

Cancel claims 2-59

Claim 60 (new): An assembly of simultaneously transmitted electromagnetic signals, said signals being related to each other in said assembly so as to communicate stored information to a receiver, said signals being generated by modulating selected subsets of a set of stored binary spreading-code sequences corresponding to nodes in a multi-node communication network onto a sinusoidal electromagnetic carrier, at least one subset of said set of binary spreading-code sequences containing more than one of said binary spreading-code sequences, each subset of said set of binary spreading-code sequences employing a corresponding portion of said information.

Claim 61 (new): An assembly of simultaneously transmitted electromagnetic signals, said signals being related to each other in said assembly so as to communicate stored information within a transmitting node to a receiving node in a multi-mode communication network, said assembly of signals being produced by a process of:

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- a) assigning blocks of bits employing said stored information to corresponding subsets of a set of stored binary spreading-code sequences corresponding to nodes in said multi-node communication network, at least one of said subsets of said set of binary spreading-code sequences containing more than one of said binary spreading-code sequences; and
- b) simultaneously transmitting selected subsets of said set of stored binary spreading-code sequences from said transmitting node to said receiving node.

Claim 62 (new): An assembly of electromagnetic signals, said signals being related to each other in said assembly so as to communicate stored information within a transmitting node to a particular receiving node of a multi-node communication network, said assembly of signals being produced by a process of:

- a) generating a set of stored binary spreading-code sequences by combining a first group of stored data with a second group of stored data, said set of stored binary spreading-code sequences containing more than one binary spreading-code sequence;
- b) assigning blocks of bits embodying said stored information to corresponding subsets of said set of stored binary spreading-code sequences, each of said subsets of said set of binary spreading-code sequences containing at least one of said stored binary spreading-code sequences; and
- c) transmitting selected subsets of said set of binary spreading-code sequences from said transmitting node to said receiving node.

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Claim 63 (new): The assembly of signals of claim 60 wherein said set of stored binary spreading-code sequences comprises combined contents of specified stages of a first binary shift register and second binary shift register.

Claim 64 (new): The assembly of signals of claim 60 wherein said set of stored binary spreading-code sequences comprises combined contents of specified stages stored within at least one random access memory module.

Claim 65 (new): The assembly of signals of claim 60 wherein each of said selected subsets of said set of stored binary spreading-code sequences comprises two binary spreading-code sequences.

Claim 66 (new): The assembly of signals of claim 65 wherein the two binary sequences comprising each of said selected subsets are transmitted simultaneously by modulating a first binary sequence onto a first sinusoidal electromagnetic carrier signal, and by modulating a second binary sequence onto a second sinusoidal electromagnetic carrier signal, said first and second carrier signals having the same frequency but being out of phase with each other.

Claim 67 (new): The assembly of signals of claim 60 wherein each of said selected subsets of said set of stored binary spreading-code sequences comprises three binary spreading-code sequences.

Claim 68 (new): The assembly of signals of claim 67 wherein the three stored binary sequences comprising each of said selected subsets are transmitted simultaneously by modulating a first binary sequence onto a first sinusoidal electromagnetic carrier signal, by modulating a second binary sequence onto a second sinusoidal electromagnetic carrier signal, and by modulating a third binary sequence onto a third sinusoidal electromagnetic

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carrier signal, said first, second and third carrier signals having the same frequency by being out of phase with each other.

Claim 69 (new): The assembly of signals of claim 60 wherein each of said selected subsets of said set of stored binary spreading-code sequences comprises four binary spreading-code sequences.

Claim 70 (new): The assembly of signals of claim 69 wherein the four stored binary sequences comprising each of said selected subsets are transmitted simultaneously by modulating a first binary sequence onto a first sinusoidal electromagnetic carrier signal, by modulating a second binary sequence onto a second sinusoidal electromagnetic carrier signal, by modulating a third binary sequence onto a third sinusoidal electromagnetic carrier signal, and by modulating a fourth binary sequence onto a fourth sinusoidal electromagnetic carrier signal, said first, second, third, and fourth carrier signals having the same frequency but being out of phase with each other.

Claim 71 (new): The assembly of signals of claim 61 wherein said stored binary spreading-code sequences are generated by combining contents of specified stages of a first binary shift register with contents of specified stages of a second binary shift register.

Claim 72 (new): The assembly of signals of claim 61 wherein said stored binary spreading-code sequences are generated by combining contents of specified stages within a random access memory module.

Claim 73 (new): The assembly of signals of claim 62 wherein all of said blocks of bits embodying said stored information are of equal fixed length.

Claim 74 (new): The assembly of signals of claim 62 wherein, when at least one subset of said set of stored binary spreading-code sequences comprises more than one sequence:

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- a) each of said subsets of said set of binary sequences received at said particular receiving node is correlated with each binary sequence of said set of binary sequences so as to produce a set of correlation outputs, each correlation output corresponding to a specified one of said binary sequences, and
- b) said set of correlation outputs is evaluated to identify a particular one of said subsets of said set of binary sequences as being most likely to have been transmitted from said transmitting node to said particular receiving node.

Claim 75 (new): The assembly of signals of claim 74 wherein each of said selected subsets of said set of stored binary spreading-code sequences comprises two binary spreading-code sequences.

Claim 76 (new): The assembly of signals of claim 74 wherein each of said selected subsets of said set of stored binary spreading-code sequences comprises three binary spreading-code sequences.

Claim 77 (new): The assembly of signals of claim 74 wherein each of said selected subsets of said set of stored binary spreading-code sequences comprises four binary spreading-code sequences.